

**2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.**

<p><u>Core PE</u> Use information from several sources to provide evidence that Earth events can occur quickly or slowly. [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.]</p>	<p><u>DCI</u> • Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe.</p>	<p><u>CCC</u> • Stability and Change – Things may change slowly or rapidly.</p>	<p><u>Practices</u> Constructing Explanations and Designing Solutions – <i>Constructing explanations and designing solutions in K-2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</i> Make observations from several sources to construct an evidence-based account for natural phenomena.</p>
<p><u>Activity</u> Whole Class: Brainstorm a list of “earth events,” including things like volcanic eruptions, earthquakes, and erosion.</p>	<p><u>Question</u> What are some earth events?</p>	<p><u>Objectives / Next Steps</u> • There are many types of earth events, including volcanic eruptions, earthquakes, erosion, flooding, weather events,...</p> <p><i>On what time scale do these events operate?</i></p>	<p><u>Notes</u></p>
<p>Small Groups: Use a sandbox and sandstone box to compare the rate of erosion of weathered versus unweathered materials.</p>	<p>On what time scale do these events operate?</p>	<ul style="list-style-type: none"> <li>• Some events occur quickly while others are very slow.</li> <li>• Even the same events, under differing conditions, can occur at different rates.</li> </ul>	<p>This activity is an add-on to the <a href="#">2-ESS2-1 lesson</a>. Students can observe weathered sand moving quickly and only tiny bits of sandstone moving.</p>
<p>Small Groups: Perform some research on another earth event, developing a timeline to describe cause and effect alongside the event’s time scale.</p>	<p>On what time scale do these events operate? [Continued]</p>	<ul style="list-style-type: none"> <li>• Some events occur quickly while others are very slow.</li> <li>• Even the same events, under differing conditions, can occur at different rates.</li> </ul>	<p>The <a href="#">illustration guide</a> is an available option. When the students are researching, have them record information sources to provide evidence for their conclusions.</p>

<p>Whole Class: Share findings with the whole class, creating a lineup of timelines from short-term to long-term events.</p>	<p>On what time scale do these events operate? [Continued]</p>	<ul style="list-style-type: none"><li>• Some events occur quickly while others are very slow.</li><li>• Even the same events, under differing conditions, can occur at different rates.</li></ul>	<p>A number of sample timelines are available for reference:</p> <ul style="list-style-type: none"><li>• <a href="#">Drought</a></li><li>• <a href="#">Flooding</a></li><li>• <a href="#">Weathering &amp; Erosion</a></li><li>• Wildfires</li></ul>
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